

REMARKS

By the present amendment, Applicant has cancelled Claims 1 and 2, and added Claims 3-6, which remain pending in the present application. Claim 3 is the sole independent claim.

Applicant appreciates the courtesies extended to Applicant's representative during the personal interview held October 13, 2005. The present response summarizes the substance of the interview. At the interview a proposed amendment was presented for discussion. In addition, a model was exhibited demonstrating the embodiment of the claims. Proposed new Claims 3-6 set forth a slip ring end housing for an alternator, and a rectifier. Arguments were advanced that the devices of the applied prior art did not show the features of the claimed embodiments, as proposed. The Examiner indicated the proposed amendment would be considered upon filing of a formal response, however, it is unclear as to whether the specification contains enough material to support the claimed embodiments.

In the recent Office Action dated May 19, 2005, the Examiner objected to Claims 1 and 2 because of minor informalities. Also, Claims 1 and 2 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1 and 2 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Matthai in view of Asao et al. The cancellation of Claims 1 and 2 by the present amendment serves to render these particular grounds of objection and rejection moot.

The claims in this application have been revised to more particularly define Applicant's unique construction in view of the prior art of record. Reconsideration of the claims in light of the amendments and for the following reasons is respectfully requested.

Applicant submits that support for the newly presented claims is found in the original specification and drawings. Applicant submits that no new matter has been entered.

Applicant has submitted new Claims 3-6, drawn to the structure of the slip ring end housing of an alternator. The embodiments of these claims are set forth as having a casing, and a rectifier. The casing has a first end, a second end and a side wall. The first end has a closed surface, the closed surface defining a plurality of apertures and having a boss centrally disposed thereon. The boss includes at least three ribs periodically spaced there around for providing stabilization and support for the bearing wall. The plurality of apertures systematically are positioned about the first end, so as to provide a myriad of air flow paths therethrough. At least one of the apertures is an irregularly shaped window allowing a maximum amount of air to pass through. The air flow is essential for maintaining heat dissipation.

The second end defines a mounting edge surface, the mounting edge surface having a plurality of throughbores the mounting edge surface circumscribing an open end of the casing. The side wall is disposed between the first end and the second end. The side wall also defines at least one electrical connector mount therethrough. The rectifier is mounted in the casing portion adjacent to the window to allow for maximum airflow for heat dissipation from the rectifier.

The rectifier has a first heat sink, a terminal block, a second heat sink, and a plurality of diodes. The first heat sink is mounted to one side of the terminal block, such that the first heat sink has a plurality of fins extending outwardly away from the terminal block. At least two of the fins are substantially larger than the remaining fins. The second heat sink is mounted on the other side of the terminal block, such that the second heat sink has a

plurality of fins extending outwardly away from the terminal block in the direction opposite the fins of the first heat sink. The terminal block has a plurality of through apertures for allowing air flow for contributing to the heat dissipation from the rectifier.

The first set of diodes is divided into at least three pairs of diodes. The second set of diodes has at least three diodes, such that each diode of the second set of diodes is associated with a respective one of the at least three pairs of diodes of the first set.

Applicant will advance arguments hereinbelow to illustrate the manner in which the presently claimed invention is patentably distinguishable from the cited and applied prior art. Reconsideration of the present application is respectfully requested.

The applied primary prior art reference to Matthai discloses a rectifier for an alternator having two U-shaped sheet metal members having legs through which the cooling air passes and have bases onto which at least two of the load current carrying diodes are fastened. The connection between the diodes and the sheet metal members form the heat sink, a highly heat conductive connection.

The applied secondary prior art reference to Asao et al. discloses a rectifier for an alternator having a positive-side heat sink and a negative-side heat sink disposed on a generally flat plane perpendicularly intersecting a shaft. The longitudinal direction of the positive-side diodes secured to the radially inner positive-side heat sink are disposed along the radial direction of the positive-side heat sink, and the longitudinal direction of the negative-side diodes secured to the radially outer negative-side heat sink are disposed along the circumferential direction of the negative-side heat sink.

Neither of the applied prior art references disclose the structure of the instant claims. Specifically, neither Matthai nor Asao et al. show a boss on an end of a casing having a

plurality of ribs for providing stabilization of the boss against the end of the casing. In addition, neither of Matthai nor Asao et al. show at least one ventilation aperture having an irregular shape for providing maximum air flow across the rectifier mounted in the casing. In addition, neither Matthai nor Asao et al. teach the terminal block having a plurality of apertures therethrough for providing still more air flow paths for the dissipation of heat generated by the rectifier. Applicant respectfully submits that there is no guidance nor motivation found in either Matthai or Asao et al., alone or in combination as alleged by the Examiner, that would have led one having ordinary skill in the art to arrive at the embodiments as set forth in the instant claims.

Applicant respectfully submits that for at least these reasons, newly presented Claims 3-6 are allowable over the prior art applied of record.

For the foregoing reasons, Applicant respectfully submits that the present application is in condition for allowance. If such is not the case, the Examiner is requested to kindly contact the undersigned in an effort to satisfactorily conclude the prosecution of this application.

Respectfully submitted,



Warren S. Edmonds
Registration No. 39,642
(703) 486-1000

RCL:DHT:wse